

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
23 June 2005 (23.06.2005)

PCT

(10) International Publication Number
WO 2005/056123 A1

(51) International Patent Classification⁷: **A63B 21/078**

(21) International Application Number:

PCT/KR2004/003294

(22) International Filing Date:

15 December 2004 (15.12.2004)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

20-2003-0038942

15 December 2003 (15.12.2003) KR

10-2004-0005197

20 January 2004 (20.01.2004) KR

10-2004-0105205

26 November 2004 (26.11.2004) KR

(71) Applicant and

(72) Inventor: LEE, Byung, don [KR/KR]; 12-96, Kalhyun-Dong, Eunpyung-ku, Scoul 122-800 (KR).

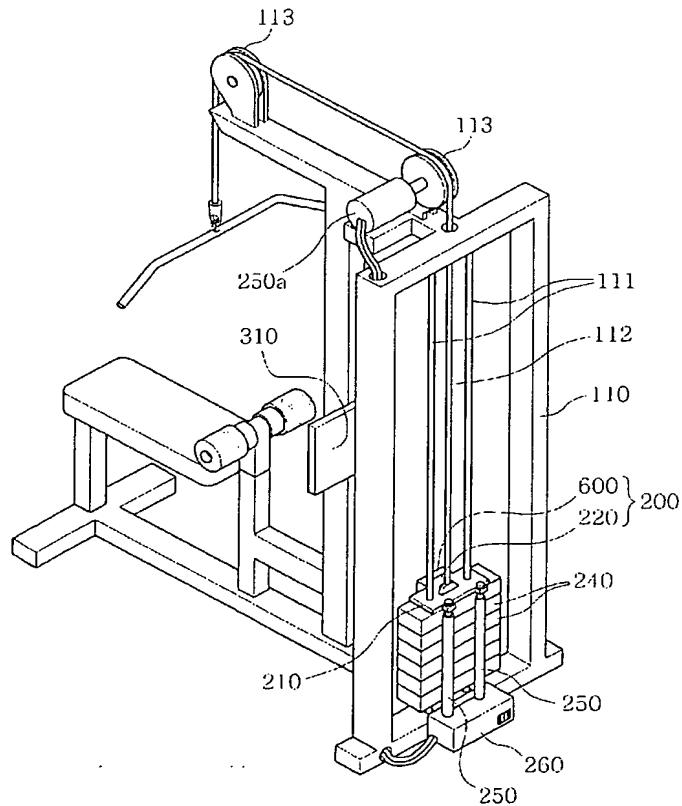
(74) Agent: JO, Chi, Hoon; Ewha Bldg., 5F., 736-18, Yoksam-Dong, Kangnam-ku, Seoul 135-924 (KR).

(81) Designated States (*unless otherwise indicated, for every kind of national protection available*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (*unless otherwise indicated, for every kind of regional protection available*): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO,

[Continued on next page]

(54) Title: WEIGHT-TRAINING MACHINE HAVING INDEPENDENT POWER GENERATING FUNCTION AND STACK FOR THE MACHINE



(57) Abstract: Disclosed is a weight-training machine having an independent power generating function, which may improve the exercising effect, control the weight caused by a solenoid without external power together with keeping a conventional button manner and eliminate a space limitation for installation of the machine. The weight-training machine has an independent power generating function so as to minutely adjust an exercising load without supply of external power. An operation distance between a fixing plate and a push button of a fixing device is minimized to allow one-touch manipulation. The solenoid may be operated with a lower electric energy. Thus, stacks are not shaken in right/left or front/rear direction on the basis of the fixing plate and the insert groove when a stack selected by the fixing plate and stacks upon the stack are moved up and down at the same time.



SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

Published:

- *with international search report*
- *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments*